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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/529,245

03/24/2005

Eric Kolodziejczyk

12701-595

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29157 7590
K&L Gates LLP
P.O. Box 1135
CHICAGO, IL 60690

07/24/2009

EXAMINER

KAROL, JODY LYNN

ART UNIT

PAPER NUMBER

1617

NOTIFICATION DATE

DELIVERY MODE

07/24/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

chicago.patents@klgates.com

Office Action Summary	Application No. 10/529,245	Applicant(s) KOLODZIEJCZYK ET AL.	
	Examiner Jody L. Karol	Art Unit 1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 7-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Receipt is acknowledged of applicant's Amendment/Remarks filed 1/29/2009.

Claims 7-20 remain withdrawn as pertaining to the non-elected invention. Thus, claims 1-20 are pending and claims 1-6 are currently under consideration.

WITHDRAWN REJECTIONS

1. In view of Applicant's amendment to the abstract, the objection to the specification is herein withdrawn.

Response to Arguments

2. Applicant's arguments filed 1/29/2009 have been fully considered but they are not persuasive.

Applicant argues that the oil-in-water emulsion taught by İbanoğlu does not teach or suggest the product of claim 1 because it is diluted in a phosphate buffer having a pH of 7.0, and that by diluting the emulsion with a buffer having a pH of 7.0, the emulsion could not have a pH range within which the electrostatic interaction between the whey protein and gum arabic occurs. In response it is respectfully submitted that pH is considered to be an inherent property of the composition. "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties the applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir.

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1990). Thus, since İbanoğlu teach the whey protein and the gum arabic as claimed at the requisite concentrations, the pH range is considered to be an inherent property of the product composition. It is noted that the claim language does not exclude the presence of a buffer. It is also noted that the Applicant refers to page numbers in the instant specification on page 4 of the remarks that do not correlate with the instant specification as filed.

Applicant further argues that the finished emulsion taught by Prakash et al. has a total protein and polysaccharide level exceedingly the range of the claims. In response it is respectfully submitted that Prakash et al. clearly teach diluting the finished emulsion. As previously described in the 9/29/2008 Office Action and reproduced *infra* in the rejections, the diluted emulsion has the requisite concentration of protein and polysaccharide as instantly claimed.

The Applicant alleges that if the diluted emulsion taught by Prakash et al. reads on the present claims, the diluted emulsion is still deficient because it would fail to have a pH range within which the electrostatic interaction between the protein/polysaccharide oppositely charged occurs. Applicant further alleges that by diluting the emulsion to a 1:1000 dilution as taught by Prakash et al., the initial pH of 3.0 will be diluted to a pH of 7.0. The Examiner respectfully disagrees. A 1:1000 dilution of the emulsion at pH 3.0 will not necessarily result in an emulsion at pH 7.0. The change in pH depends on a number of factors, discussed at length by Bates ("Measurement of the Effect of Dilution upon pH," *Analytical Chemistry*, 1954, 26(5): pgs 871-974). It is particularly noted that the change in pH upon dilution of weak acid buffer solutions becomes negligible as the

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pH of the solution approaches 4.0 (see Figure 1, page 873). Furthermore, as stated *supra*, “products of identical chemical composition can not have mutually exclusive properties.” A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties the applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Prakash et al. teach the whey protein and the gum arabic as claimed at the requisite concentrations, and thus the pH range is considered to be an inherent property of the product composition.

Thus, for these reasons, Applicant’s arguments are found unpersuasive. Said rejection is maintained.

MAINTAINED REJECTIONS

3. The following rejections have been maintained from the previous Office Action dated 9/28/2008:

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by İbanoğlu, E. ("Rheological Behavior of Whey Protein Stabilized Emulsions in the Presence of Gum Arabic," *J. of Food Engineering*, Vol. 52, May 2002, pgs. 273-277).

İbanoğlu teaches whey protein isolate-stabilized emulsions additionally comprising gum arabic (acacia gum) as a stability enhancer (see abstract and page 273). İbanoğlu explicitly teaches an oil-in-water emulsion comprising 1% by weight whey protein isolate and 2.5% by weight gum arabic (see page 274, section 2.2). This gives 3.5% by weight protein and polysaccharide as claimed in the instant claim 1, and a protein to polysaccharide ratio of 1:2.5, as claimed in the instant claim 6.

6. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Prakash et al. ("The Effects of Added Proteins on the Functionality of Gum Arabic in Soft Drink Emulsion Systems," *Food Hydrocolloids*, Vol. 4, No. 3, 1990, pgs. 185-195).

Prakash et al. teach adding whey protein to increase the functionality of gum arabic (acacia gum) as an emulsifier and stabilizer in soft drink emulsions (see abstract and page 177). The emulsions taught by Prakash et al. are prepared using a stock solution of 240 mg of gum arabic in 1.0 mL of water and 0.2 mL of soybean oil, diluted to a final dilution of 1:1000 (see page 178, Emulsion activity index (EAI)). This gives approximately 0.2 mg of gum arabic/mL of emulsion. Prakash et al. further teach adding whey protein to the gum arabic sample solution at 0.002 g/mL of emulsion and 0.004 g/mL of emulsion (see page 179-180, Results, Tables I-II, and Figure 1). This gives a ratio of protein to polysaccharide of 20:1 or 10:1 for the 0.004 g/mL and 0.002

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g/mL of whey protein respectively. Furthermore, the total weight percentage of whey protein and gum arabic can be estimated using the density of the soft drink emulsion and will fall within 0.01 to 5% weight as claimed in the instant claim for all reasonable densities of a soft drink emulsion. For example, the density would have to be greater than about 42 g/mL for the weight percentage of whey protein and gum arabic to drop below 0.01%, and lower than about 0.09 g/ml for the weight percentage to be higher than 5%.

Conclusion

No claims are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jody L. Karol whose telephone number is (571)270-3283. The examiner can normally be reached on 8:30 am - 5:00 pm Mon-Fri EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan can be reached on (571) 272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Jody L. Karol/

Examiner, Art Unit 1617

/SREENI PADMANABHAN/

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Supervisory Patent Examiner, Art Unit 1617